

WEST

Freeform Search

Database:

US Patents Full-Text Database
 US Pre-Grant Publication Full-Text Database
 JPO Abstracts Database
 EPO Abstracts Database
 Derwent World Patents Index
 IBM Technical Disclosure Bulletins

Term:

L4 and liquid crystal\$

Display: 20 Documents in Display Format: - Starting with Number 1

Generate: ☐ Hit List ☒ Hit Count ☐ Side by Side ☐ Image

Search

Clear

Help

Logout

Interrupt

Main Menu

Show S Numbers

Edit S Numbers

Preferences

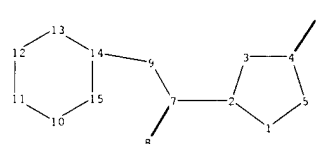
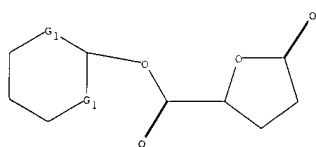
Cases

Search History

DATE: Wednesday, August 06, 2003 [Printable Copy](#) [Create Case](#)

<u>Set Name</u> side by side	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u> result set
<i>DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>			
<u>L5</u>	L4 and liquid crystal\$	23	<u>L5</u>
<u>L4</u>	mdw	174	<u>L4</u>
<u>L3</u>	L1 and liquid crystal\$	1119	<u>L3</u>
<u>L2</u>	mdw with (1198 or 1212)	0	<u>L2</u>
<i>DB=USPT,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>			
<u>L1</u>	1198 or 1212	22698	<u>L1</u>

END OF SEARCH HISTORY



chain nodes :

6 7 8 9

ring nodes :

1 2 3 4 5 10 11 12 13 14 15

chain bonds :

2-7 4-6 7-8 7-9 9-14

ring bonds :

1-2 1-5 2-3 3-4 4-5 10-11 10-15 11-12 12-13 13-14 14-15

exact/norm bonds :

1-2 1-5 2-3 2-7 3-4 4-5 4-6 7-8 7-9 9-14 10-11 10-15 11-12 12-13 13-14
14-15

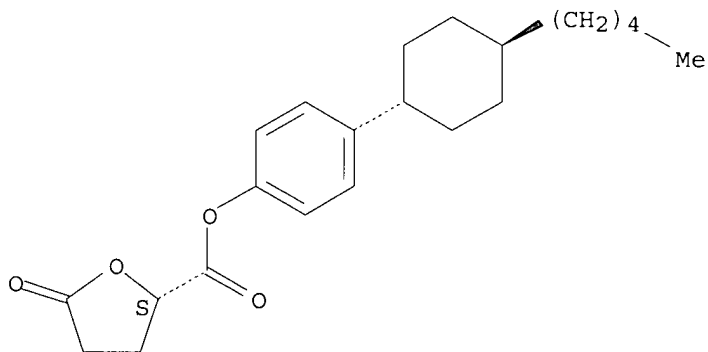
G1:C,N

Match level :

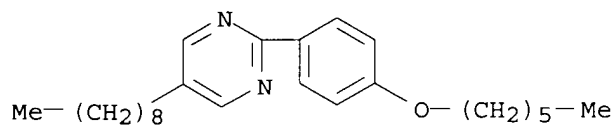
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 8:CLASS 9:CLASS 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom

(liq. crystal compn., for display)
 IT 145701-39-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, as liq. crystal compn.)
 IT 145920-89-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (liq. crystal compn., for display)
 RN 145920-89-4 CAPLUS
 CN 2-Furancarboxylic acid, tetrahydro-5-oxo-, 4-(4-pentylcyclohexyl)phenyl
 ester, [1(S)-trans]-, mixt. with 2-[4-(decyloxy)phenyl]-5-octylpyrimidine,
 5-heptyl-2-[4-(heptyloxy)phenyl]pyrimidine, 5-heptyl-2-[4-
 (nonyloxy)phenyl]pyrimidine, 5-heptyl-2-[4-(octyloxy)phenyl]pyrimidine,
 2-[4-(hexyloxy)phenyl]-5-nonylpyrimidine and 5-octyl-2-[4-
 (octyloxy)phenyl]pyrimidine (9CI) (CA INDEX NAME)
 CM 1
 CRN 145701-39-9
 CMF C22 H30 O4

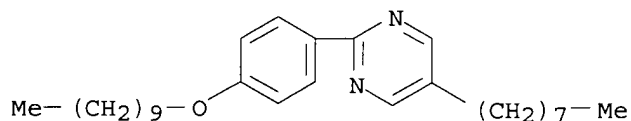
Absolute stereochemistry.



CM 2
 CRN 57202-56-9
 CMF C25 H38 N2 O



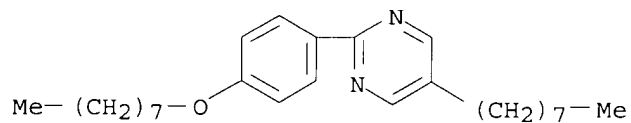
CM 3
 CRN 57202-52-5
 CMF C28 H44 N2 O



CM 4

CRN 57202-50-3

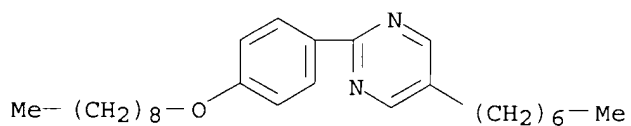
CMF C26 H40 N2 O



CM 5

CRN 57202-40-1

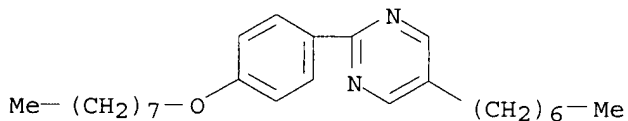
CMF C26 H40 N2 O



CM 6

CRN 57202-39-8

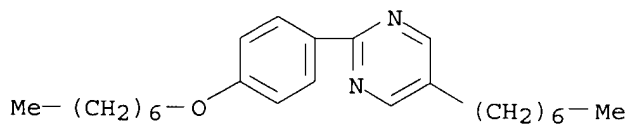
CMF C25 H38 N2 O



CM 7

CRN 57202-38-7

CMF C24 H36 N2 O



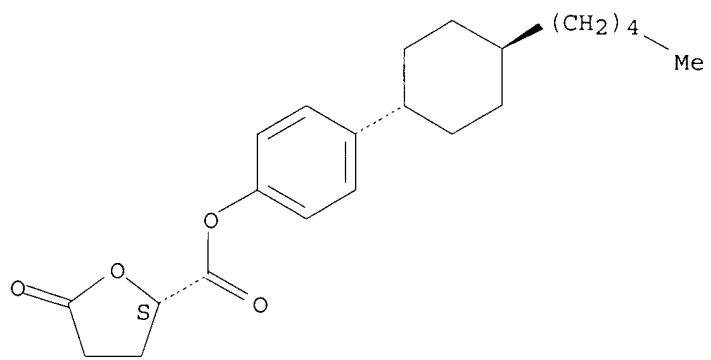
IT **145701-39-9P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as **liq. crystal** compn.)

RN 145701-39-9 CAPLUS

CN 2-Furancarboxylic acid, tetrahydro-5-oxo-, 4-(4-pentylcyclohexyl)phenyl
ester, [1(S)-trans]- (9CI) (CA INDEX NAME)

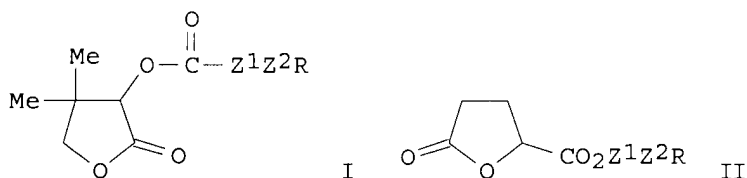
Absolute stereochemistry.



AN 1993:147448 CAPLUS
 DN 118:147448
 TI Preparation of .gamma.-butyrolactone derivatives as liquid and crystal compositions
 IN Tsuchiya, Kazuhiko; Sugiura, Atsushi; Suzuki, Kenji; Fujii, Tsunenori
 PA Kanto Chemical Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C07D307-33
 ICS C07D405-12; C07D405-14; C07D407-12; C07D407-14; C09K019-34; C09K019-42
 CC 27-6 (Heterocyclic Compounds (One Hetero Atom))
 Section cross-reference(s): 75
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04208277	A2	19920729	JP 1990-330451	19901130
JP 1990-330451		19901130		
MARPAT 118:147448				

GI



AB .gamma.-Butyrolactone derivs. [I, II; R = C1-16 linear or branched alkyl or alkoxy; Z1, Z2 = (F-substituted) p-phenylene, 1,4-cyclohexylene, 1,4-pyrimidinediyl, 2,5-pyridinediyl, etc.] are prepd. A mixt. of 4-(dimethylamino)pyridine, 4-(octyloxy)biphenyl-4'-carboxylic acid, and (R)-(-)-3,3-dimethyl-2-hydroxy-.gamma.-butyrolactone was added to a soln. of DCC in CH2Cl2 with stirring at room temp. to give 52.4% (R)-I (R = octyloxy, Z1 = Z2 = p-phenylene) of 99.0% purity. Two **liq. crystal** display devices contg. I showed good response time, spontaneous polarization, and tilt angle.

ST butyrolactone prepn **liq crystal** compn

IT **Liquid crystals**
 (.gamma.-butyrolactone derivs.)

IT 21461-84-7 58415-63-7, 4-(5-Octylpyrimidin-2-yl)phenol 59748-18-4,
 4-Octyloxybiphenyl-4'-carboxylic acid 83626-36-2 88196-69-4
 110500-54-4 118350-46-2 131951-45-6 146575-69-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (esterification of, in prepn. of **liq. crystal** compn.)

IT 129615-58-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (**liq. crystal** compn. contg.)

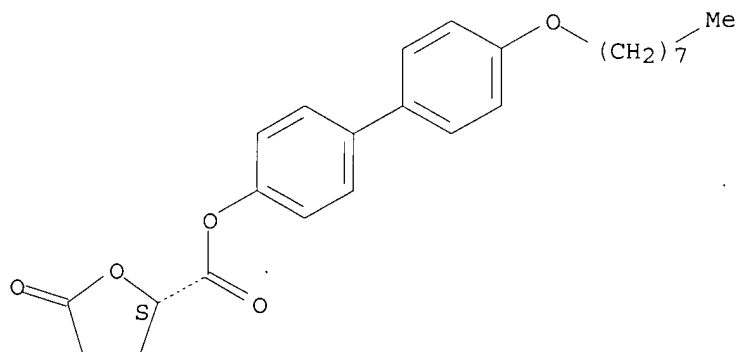
IT 146575-70-4P 146575-71-5P 146575-72-6P 146575-73-7P 146575-74-8P
146575-75-9P 146575-76-0P 146575-77-1P
146575-78-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, as **liq. crystal** compn.)

IT **146575-75-9P 146575-76-0P 146575-77-1P**
146575-78-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, as **liq. crystal** compn.)

RN 146575-75-9 CAPLUS

CN 2-Furancarboxylic acid, tetrahydro-5-oxo-, 4'-(octyloxy)[1,1'-biphenyl]-4-yl ester, (S)- (9CI) (CA INDEX NAME)

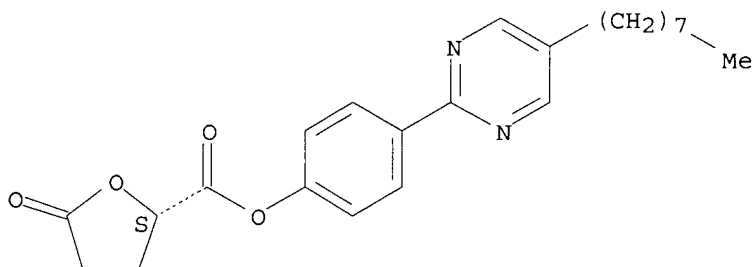
Absolute stereochemistry.



RN 146575-76-0 CAPLUS

CN 2-Furancarboxylic acid, tetrahydro-5-oxo-, 4-(5-octyl-2-pyrimidinyl)phenyl ester, (S)- (9CI) (CA INDEX NAME)

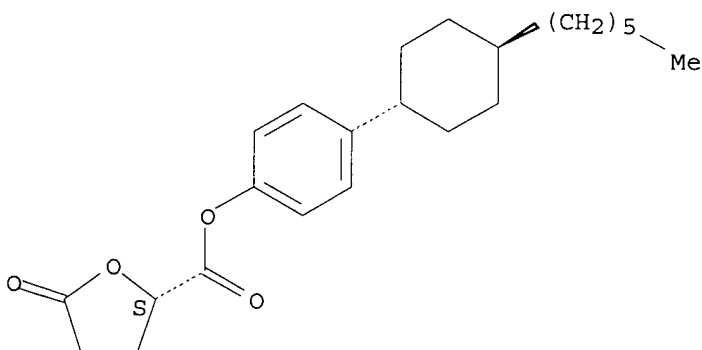
Absolute stereochemistry.



RN 146575-77-1 CAPLUS

CN 2-Furancarboxylic acid, tetrahydro-5-oxo-, 4-(4-hexylcyclohexyl)phenyl ester, [1(S)-trans]- (9CI) (CA INDEX NAME)

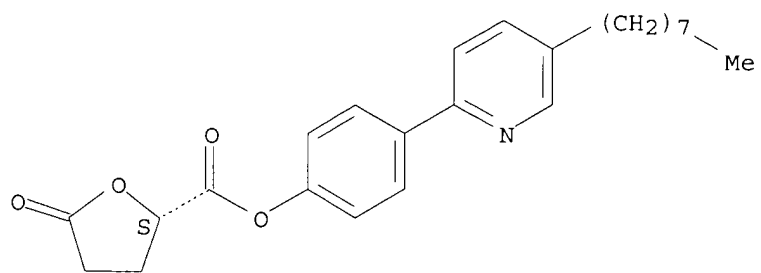
Absolute stereochemistry.



RN 146575-78-2 CAPLUS

CN 2-Furancarboxylic acid, tetrahydro-5-oxo-, 4-(5-octyl-2-pyridinyl)phenyl ester, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



AN 1995:740928 CAPLUS
 DN 123:127788
 TI Mesomorphic compound, **liquid crystal** composition
 containing the compound, **liquid crystal** device using
 the composition, **liquid crystal** apparatus and display
 method.
 IN Shinichi, Nakamura; Takao, Takiguchi; Takashi, Iwaki; Takeshi, Togano;
 Yoko, Kosaka
 PA Canon K. K., Japan
 SO Eur. Pat. Appl., 84 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM C09K019-34
 ICS C09K019-12; C09K019-14; C09K019-32; C09K019-20; C09K019-04;
 C09K019-46; C07D239-26; C07D213-30; C07D319-06; C07C069-76
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 75

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 640676	A1	19950301	EP 1994-113508	19940830
	EP 640676	B1	19990120		
	R: CH, DE, ES, FR, GB, IT, LI, NL, SE				
	JP 07097354	A2	19950411	JP 1993-237215	19930831
	JP 3230024	B2	20011119		
	JP 07133244	A2	19950523	JP 1993-243580	19930906
	JP 3216752	B2	20011009		
	US 5653913	A	19970805	US 1996-628446	19960405
PRAI	JP 1993-237215	A	19930831		
	JP 1993-243580	A	19930906		
	US 1994-297840	B1	19940830		

OS MARPAT 123:127788

AB A mesomorphic compd. CmH_{2m}+10(CH₂)_n(CH₂)_p(CH₂)_q-Y₁-A₁-R₁ [R₁ = H, halogen, CN, or a linear, branched or cyclized alkyl group having 1-30 C atoms capable of including at least one -CH₂- group which can be replaced with -O-, -S-, -CO-, -CH(Cl)-, -CH(CN)-, -CCH₃(CN)-, -CH:CH- or -C.tplbond.C- provided that heteroatoms are not adjacent to each other and capable of including at least one H which can be replaced with F; m, n, p and q = 1-16 provided that m + n + p + q .ltoreq. 18; Y₁ denotes a single bond, -O-, -CO-, -COO-, -OCO-, -CH:CH or -C.tplbond.C-; A₁ = -A₂-, -A₂-X₁-A₃- or -A₂-X₁-A₃-X₂-A₄ in which A₂, A₃ and A₄ independently denote a divalent cyclic group; X₁, X₂ = a single bond, -COO-, -OCO-, -CH₂O-, -OCH₂-, -CH₂CH₂-, -CH:CH- or -C.tplbond.C-] having .gtoreq.2 ether groups between alkylene groups in a specific alkoxy perfluoroalkyl terminal group is suitable as a component for a **liq. crystal** compn. providing improved response characteristics and a high contrast. A **liq. crystal** device is constituted by disposing the **liq. crystal** compn. between a pair of substrates. The **liq. crystal** device is used as a display panel constituting a **liq. crystal** app. providing good display characteristics.

ST mesomorphic **liq crystal** device display; perfluoroalkyl mesomorphic compd

IT **Liquid crystals**
 (perfluoroalkyl mesomorphic compd.)

IT Optical imaging devices
 (electrooptical **liq.-crystal**, perfluoroalkyl mesomorphic compd.)

IT	166439-30-1	166439-31-2	166439-32-3	166439-33-4	166439-34-5
	166439-35-6	166439-36-7	166439-37-8	166439-38-9	166439-39-0
	166439-40-3	166439-41-4	166439-42-5	166439-43-6	166439-44-7
	166439-45-8	166439-46-9	166439-47-0	166439-48-1	166439-49-2

166439-50-5 166439-51-6 166439-52-7 166439-53-8 166439-54-9
 166439-55-0 166439-56-1 166439-57-2 166439-58-3 166439-59-4
 166439-60-7 166439-61-8 166439-62-9 166439-63-0 166439-64-1
 166439-65-2 166439-66-3 166439-67-4 166439-68-5 166439-69-6
 166439-70-9 166439-71-0 166439-72-1 166439-73-2 **166439-74-3**
 166439-75-4 166439-76-5 166439-77-6 166439-78-7 166439-79-8
 166439-80-1 166439-81-2 166439-82-3 166439-83-4 166439-84-5
 166439-85-6 166439-86-7 166439-87-8 166439-88-9 166439-89-0
 166439-90-3 166439-91-4 166439-92-5 166439-93-6 166439-94-7
 166439-95-8 166439-96-9 166439-97-0

RL: MOA (Modifier or additive use); USES (Uses)

(perfluoroalkyl mesomorphic compd. for liq. crystal
 compn.)

IT 166398-09-0P 166439-21-0P 166439-22-1P 166439-23-2P 166439-24-3P
 166439-25-4P 166439-26-5P 166439-27-6P 166439-28-7P 166439-29-8P

RL: MOA (Modifier or additive use); SPN (Synthetic preparation); PREP
 (Preparation); USES (Uses)

(perfluoroalkyl mesomorphic compd. for liq. crystal
 compn.)

IT 166397-72-4P 166439-98-1P 166439-99-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)

(perfluoroalkyl mesomorphic compd. for liq. crystal
 compn.)

IT **166439-74-3**

RL: MOA (Modifier or additive use); USES (Uses)

(perfluoroalkyl mesomorphic compd. for liq. crystal
 compn.)

RN 166439-74-3 CAPLUS

CN 2-Furancarboxylic acid, tetrahydro-5-oxo-4-pentyl-, 4'-[[4-[(2,2,3,3,4,4-
 hexafluoro-5-methoxypentyl)oxy]benzoyl]oxy][1,1'-biphenyl]-4-yl ester,
 trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.

